## REMARKS

This is in response to the Official Action of April 28, 2006, in connection with the above-identified application. Applicants would like to begin by acknowledging with appreciation the indication in the outstanding Official Action that claims 9-21 are allowable and that claims 5-7 recite allowable subject matter and would be allowable if rewritten in independent format including all of the limitations of the base claim and any intervening claims. However, Applicants respectfully decline at this point in the prosecution of the instant application to rewrite these claims in independent format because Applicants respectfully submit that the amendment to claim 1 presented herein places all of the claims now pending in the instant application in immediate condition for allowance.

Applicants have amended claim 1 in order to more precisely define the scope of the present invention, taking into consideration the outstanding Official Action. Specifically, claim 1 has been amended to incorporate the subject matter recited in original claim 4. Accordingly, claim 1 now recites that the crystal phase adjusting buffer is a single or multiple layer film made of oxide or nitride. In light of this amendment, claim 4 has been canceled. Support for this amendment may be found throughout the specification as originally filed, including, e.g., page 7, lines 7-12. Applicants respectfully submit that all claims now pending in the instant application are in full compliance with the requirements of 35 U.S.C. §112 and are patentable over the references of record.

Turning now to the rejection of the claims over the prior art, the rejection of claims 1-4 and 8 under 35 U.S.C. §103(a) as being unpatentable over the Chiuo et al. article has been carefully considered but is most respectfully traversed in light of the following comments.

Applicants wish to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicants also note MPEP §2143.01, which states in part that, if a proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Applicants also most respectfully direct the Examiner's attention to MPEP § 2144.08 (page 2100-114) wherein it is stated that Office personnel should consider all rebuttal argument and evidence presented by applicant and the citation of In re Soni for error in not considering evidence presented in the specification.

The Official Action urges that Chiuo discloses a zinc nanowire array. The Official Action further urges that Chiuo discloses a substrate, a metal buffer layer that may be a single layer or several layers and a zinc oxide layer. However, in light of the amendments to the claims presented herein, Applicants respectfully submit that the Chiuo reference no longer discloses or suggests every element of the claimed invention.

Specifically, the claimed invention now recites that the crystal phase adjusting buffer layer is a single or multiple layer film made of oxide or nitride. This feature is

further described in the specification at, e.g., page 7, wherein a compound buffer layer comprising silicon dioxide, silicon nitride and zinc oxide is formed. To the contrary, the buffer layers disclosed in Chiuo all require at least one metal layer.

The first buffer layer described in Chiuo is made of a thin layer of titanium with a layer of copper deposited thereon. Clearly this buffer layer fails to read on the claimed invention since the buffer layer of Chiuo is made of only metal layers, whereas the claimed invention recites a buffer layer made of oxides and nitrides. No oxides or nitrides are disclosed in this first example of a buffer layer.

The second buffer layer described in Chiuo is made of a thin layer of tantalum nitride with a layer of copper deposited thereon. Applicants respectfully submit that this buffer layer also fails to read on the claimed invention because, while a nitride layer is disclosed, the buffer layer still requires deposition of a layer of metal (i.e., copper) on top of the nitride layer. The presently amended claims recite that the buffer layer is made of oxides and nitrides only. Thus, the required presence of the copper layer over the nitride layer in the second buffer layer described in Chiuo renders the buffer layer incapable of reading on the claimed limitation.

Accordingly, as Chiuo fails to disclose or suggest every element of the claimed invention, namely a buffer layer made of oxide and/or nitride, Applicants respectfully submit that a *prima facie* case of obviousness according to the guidelines set forth in MPEP §2143 has not been established. It is therefore respectfully requested that this rejection be withdrawn.

As claim 1 has now been shown to be patentable over the references of record, Applicants respectfully submit that all claims depending from claim 1 are also patentable over the references of record. Accordingly, it is respectfully requested that the rejection of claims 2, 3 and 8 be withdrawn.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,
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